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the majority of the lives insured are still such as for distinction we should call *select lives*—*i.e.*, such as would without difficulty be insured at the ordinary rate. We learn then, that since a larger reserve is certainly required for the *under-average* lives, a smaller reserve than the average is sufficient for the *above-average* or the *select* lives. But theory is not yet in a position to say what that smaller reserve should be. It is to be hoped that the valuable statistics as to the mortality among insured lives collected by the Council of the Institute of Actuaries, and shortly to be published, will enable this problem to be correctly solved, and throw much light upon many other important questions of a cognate character.—ED. *J.I.A.*

Thirteenth Annual Report of the Insurance Commissioner of the Commonwealth of Massachusetts. January 1, 1868. Part II. Life and Accident Insurance.

IN the *Journal* for April last, we gave a *résumé* of the Eighth Annual Report of the Superintendent of the Insurance Department of New York, and in that for July, a detailed account of the Mutual Life Insurance Company of the same State. We believe that these contributions to our pages were not unacceptable to our readers, as serving to throw much new light on the condition of Assurance business on the other side of the Atlantic. It was seen that, in regard to Assurance as in everything else, our American cousins were not merely our rivals, but were fast becoming our teachers; that,—a new people, unencumbered with tradition and “the sacred dust of ages,”—their energetic and fruitful minds were striking out new ideas and methods to which we in this country, which had hitherto been regarded as the home if not the birth-place of Assurance, were entire strangers. These ideas and methods were not simply fantastic devices, the mere extravagancies of free thought, but were the product of sober reason and practical sense, and were directed, not only to the development of the Assurance principle, but also to the regulation of Assurance practice.

It is in view of this latter question—that of Assurance Government—that the able State paper which we now have under consideration, has for us at this moment a special interest. It has, indeed, another element of attractiveness, about which we shall probably say something. This is to be found in an elaborate essay by the learned Commissioner on the comparative merits of the “Per-

centage" and "Contribution" plans of dividing surplus,—an essay based on the opinions, printed in an appendix, which he obtained from 17 leading American Actuaries, or other competent authorities, in response to his circular letter inviting their discussion of this question. Amongst these, we find the familiar names of Sheppard Homans, David Parks Fackler, Elizur Wright and Levi W. Meech. It is to the courtesy of the last-named gentleman that we are indebted for the volume before us.

There is now going on amongst us a considerable amount of discussion on the subject of Government interference in the concerns of Assurance Offices. Most of those who are taking part in it, are treating the question as a novelty, to be slowly admitted in principle, and almost impossible to be carried out in practice. On the question of principle, it is not necessary in these columns to make any new declaration of faith. These pages have never, on this question, given out an uncertain sound. As lately as October last the following words were used in reference to it,*—"On the " publication of accounts and the legislation needed for Assurance " Offices, we would make but this remark, that never " more than now has interference on the part of the State been " needed, in order to enforce such a measure of publicity as would " enable persons of ordinary intelligence to judge of the solvency " of the Companies to which they have committed their interests. " The state of things existing with regard to Life Assurance Com- " panies has no parallel. The public have by the nature of things " to repose in them great and, in theory at least, perpetual confi- " dence; and they, in turn, too often treat the public with the " most studied and persistent secrecy. None but Companies that " fear the light would do other than welcome an impartial parlia- " mentary action which, whilst leaving them unfettered in the con- " duct of their business, would compel them to state its results " with such clearness and precision as would at least rob dishon- " esty of its congenial darkness." We cannot strengthen this language. It now remains to see how this principle, which in America has long since passed out of the stage of irresponsible discussion, is there carried into practical effect, not by a "paternal Government," claiming the right to treat its citizens as soldiers of a national army, but by a people politically free, beyond all previous example, to do every man for himself that which seemeth good in his own eyes.

* Vol. 14, p. 413.

After stating, with reference to the 47 offices doing business in Massachusetts, that "the number of new Policies issued during "the calendar year 1867 was 145,000, and the amount insured " \$420,000,000, against 119,000 Policies issued and \$353,000,000 "insured during the twelve months preceding November, 1866,"— and after showing that, at the close of 1867, there were outstanding in these Companies, 432,441 Policies, insuring \$1,234,630,474 (£246,926,095 sterling), yielding an Income of \$62,513,378, and having Assets amounting to \$130,485,501,—the Commissioner makes the following pregnant reflections:—

"The statement of these figures is sufficient, not only to "illustrate the magnitude of these interests, but to force upon "the mind an enquiry of profound interest to every policy-holder. "Whether these companies are after all funding *enough* to "meet their enormous future obligations, or whether,—between "the ambitious struggle to pay large dividends to the assured, on "the one hand, and the temptation to pay large commissions to "agents, large salaries and perquisites to officers, and large "royalties to stockholders, on the other,—the bottom of the fund "may not be reached at some day, more or less distant, with a "deficiency of a few hundred millions of dollars unprovided for? "This is by no means an impertinent question. It is one that "every policy-holder, and every one solicited to become a policy- "holder, has a right to ask. Shrewd men are asking it every day, "and not a few, who might decide more wisely, are deciding it "against the companies. Happily, in this country, there are as "yet no precedents which justify such forebodings in regard to "the future of life insurance. But almost everybody knows that "in England, where the system has had time to show its weak as "well as its strong points, neither managers of high and titled "names, and blood removed but a few degrees from royalty, nor "actuaries, the most profoundly versed in the mysteries of the "science, have saved scores of life insurance companies from "bankruptcy, and thousands of confiding policy-holders from just "such cruel disappointment.

[We entirely demur to this statement as regards the policyholders. Notwithstanding the numerous cases in which Life Insurance Companies have failed, with great loss to the shareholders, we believe we are strictly correct in stating that, hitherto, there have been very few instances indeed, and those of but trifling magnitude, in which the claims of the policyholders have not been so far provided for, that the policies have been transferred to some other Office on the existing terms.]

“ A frequent application of a decisive test to the sufficiency of the “ reserve, is of the utmost importance to the company, and, if “ well applied, serves at the same time to assure the public of its “ soundness, or give warning that it is insecure and untrustworthy. “ An attempt has been made, in obedience to the law of this “ Commonwealth, which recognizes its importance to an effective “ supervision of these interests, to apply this test in all fidelity, to “ each of the forty-seven institutions which, by location or choice, “ are subject to its application.”

In the “ sufficiency of the reserve,” the whole question is, of course, bound up. In the only two States of the Union in which laws have been passed in reference to Life Assurance “ looking towards a valuation of policies”—New York and Massachusetts—the “ standard of *legal soundness*,” as it is called by the Commissioner, or the “ ‘*low water mark*,’ above which, “ with a fair margin, is the line of safety,” as it has been elsewhere happily termed, differs, and a recent attempt to establish uniformity has failed. That adopted in Massachusetts, and the consequence of its application, are thus enacted by the Law of that State:—

“ When the actual funds of any life insurance company “ doing business in this Commonwealth are not of a net cash “ value equal to its liabilities, counting (as such) the net value of “ its policies according to the ‘ Combined Experience,’ or ‘ Actu- “ aries’ rate of mortality, with interest at four per centum per “ annum, it shall be the duty of the Insurance Commissioner to “ give notice to such company and its agents, to discontinue “ issuing new policies within this Commonwealth until such time “ as its funds have become equal to its liabilities, valuing its “ policies as aforesaid.”

In interpreting this Statute, “ the question is,” says the Commissioner, “ whether the guarantee capital is to be treated as a “ liability, so that, if the capital is impaired, the company cannot “ do business in this State. It seems very clear that it should not. “ The Act was designed for the protection of the public against “ companies unsound as regards the security due to the policy- “ holders. The capital, as regards policyholders, is not in any “ proper sense a liability, and the stockholders it leaves to look “ out for their own interests. By reference to the Detailed State- “ ments of Assets and Liabilities, in the statistical part of the “ Report, it will be seen that the standing of each company

“ having a guarantee capital, is summed up in two ways. In “ obtaining the first balance, viz., *surplus as regards policy-holders*, “ the capital is not counted as a liability. In getting the second “ balance, viz., *surplus over capital, or impairment of capital* (as “ the case may be,) it is. The latter balance addresses itself to the “ shareholders, as regards the value of their stock as an invest- “ ment; the former to the insured, as regards their security. It is “ only when the surplus as regards policy-holders shrinks into a “ deficiency as regards them, or, in other words, when the whole “ capital and something more is wanting, that the company must “ cease to take new policies within the conservative limits of “ Massachusetts.”

Under this law, and guided by this interpretation of it, the Commissioner makes his valuation of the liabilities, not quinquennially, as in the State of New York, but annually.

The results of the Valuation for 1867, are shown in very voluminous tables, occupying some 60 pages. “ The obligations of the “ companies are classified under the four general heads of Whole- “ life policies, Endowment policies, Simple Term policies, and “ Annuities, with separate tables for each. The Whole-life and “ Endowment policies are further classified by the year of issue, and “ according to the number of annual premiums stipulated to be “ paid on the policy.” The policies were valued “ by the aid of “ the Tables published by the distinguished actuary, Professor “ Elizur Wright, and of recognized authority throughout the “ insurance world,” whilst the method pursued in making the valuation, was, “ with some minor exceptions, that known as the “ *seriatim*, the reserve on each of the 430,000 policies being com- “ puted separately.” The gigantic labour of the valuation, as well as the precise and voluminous character of the returns that must have been required from the Offices in order to obtain it, will readily be understood.

Not merely on account of their intrinsic interest, but also because they may hereafter serve as models for ourselves, we have taken into our columns certain of the Tables, including the final one, showing the “surplus as regards policy-holders” and the “surplus or impairment of capital.” Further description of them is needless, though it may be well to add that the facts as regards valuations are exhibited for each Office in like form.

Of Forty-seven Life Insurance Companies doing business in Massachusetts, outstanding December 31, 1867, with their Net Value at that Date, classified according to the Year of Issue, and the Plan or Number of Premiums payable, each Year ending December 31, inclusive.

ALL THE COMPANIES COMBINED.

YEAR.	NUMBER AND CLASSIFICATION OF POLICIES.					Amount Insured.	Reversionary Dividends or Bonus Additions.	Whole Amount Insured.	Net Value, December 31, 1867.	Ratio.	
	Ordinary	Ten-Pre-mium.	Five-Prem.	Paid-up.	Exceptional.						
1830, .	1	2	..	..	2	\$2,000 00	..	..	\$1,251 13	62.56
1834, .	1	2	..	..	1	5,000 00	..	5,000 00	3,139 53	62.79
1835, .	1	1	..	..	1	1,500 00	..	5,000 00	2,250 05	45.00
1837, .	1	1	..	..	1	3,000 00	..	1,500 00	795 40	53.03
1838, .	1	1	..	..	1	1,000 00	..	1,000 00	3,000 00	1,304 48
1839, .	1	1	..	..	1	2,000 00	..	2,000 00	579 59	57.96
1840, .	1	92	..	..	93	311,850 00	\$249,370 73	561,220 73	1,300 66	65.03
1843, .	92	..	..	..	195	576,750 00	285,769 84	278,514 33	49.63	
1844, .	188	..	..	..	523	1,540,200 00	456,475 66	863,519 84	391,239 38	45.31
1845, .	518	..	..	..	999	2,666,165 00	450,523 74	1,996,675 66	856,027 72	42.87
1846, .	997	..	..	2	1,236	3,129,190 00	645,117 02	3,116,483 74	1,221,252 09	39.19
1847, .	1,232	..	..	4	1,509	3,751,393 00	691,531 51	3,74,307 02	1,397,325 03	37.02
1848, .	1,507	..	..	2	2,236	5,449,575 00	730,642 30	4,442,924 51	1,550,843 13	34.91
1849, .	2,233	..	..	3	2,645	6,020,220 00	6,020,220 00	6,180,217 30	2,002,737 94	32.41
1850, .	2,637	..	..	8	2,099	4,982,105 00	360,983 52	6,520,766 18	1,997,927 38	30.64
1851, .	2,093	..	..	6	2	4,021,240 00	525,840 47	5,243,088 52	1,469,824 71	28.03
1852, .	1,651	..	..	2	1,653	4,082,673 00	527,129 04	4,547,030 47	1,252,858 75	27.55
1853, .	1,688	..	..	4	1	1,693	5,052,470 00	4,609,802 04	1,193,529 92	25.89
1854, .	2,026	4	1	2,031	5,918,990 00	729,383 19	6,081,853 19	1,446,298 73	23.94
1855, .	2,069	..	..	9	2,079	7,390,840 00	995,924 90	6,914,914 90	1,619,116 81	23.42
1856, .	2,695	..	..	32	2,727	7,427,610 00	997,321 24	8,388,161 24	1,770,861 52	21.11
1857, .	2,612	36	1	2,660	8,427,610 00	847,432 98	8,275,042 98	1,589,774 49	19.21
1858, .	3,666	52	2	3,721	11,101,570 00	870,012 96	11,971,582 96	2,045,731 14	17.09
1859, .	5,031	68	..	1	5,121	14,549,439 00	906,219 12	15,455,658 12	2,326,444 22	15.05	
1860, .	6,463	109	..	46	8	6,626	18,511,164 87	907,371 43	19,058,536 30	2,583,320 63	13.55
1861, .	5,847	180	..	79	7	6,113	16,418,147 48	733,093 45	17,151,240 93	2,126,380 42	12.40
1862, .	10,118	738	..	235	9	11,100	27,397,821 06	743,893 43	28,141,714 49	3,106,090 35	11.04
1863, .	18,541	3,70	..	756	147	5,157	55,377,960 92	809,168 47	56,687,129 39	5,702,868 26	10.06
1864, .	25,818	9,750	50	1,557	87	37,262	95,412,065 14	910,36 66	96,322,201 80	9,030,768 81	9.43
1865, .	30,800	17,643	283	1,567	552	50,845	141,408,405 80	952,704 84	142,361,110 64	11,266,134 28	7.91
1866, .	50,120	20,910	330	1,141	73,041	228,011,063 08	1,310,343 98	229,321,427 06	11,532,839 49	5.03	
1867, .	69,739	23,294	242	828	2,270	95,423	296,245,138 13	229,893 73	296,475,021 86	7,948,493 28	2.68
Totals, .	250,439	74,375	911	5,806	4,226	336,257	\$967,113,546 48	\$17,367,640 39	\$984,481,186 87	\$77,778,123 65	7.90

ENDOWMENT-ASSURANCE POLICIES

(Including a few simple Endowments,) of Forty-seven Life Insurance Companies doing business in Massachusetts, outstanding December 31, 1867, with their Net Value at that Date, classified according to the Year of Issue, and the Plan or Number of Premiums Payable, each Year ending December 31, inclusive.

ALL THE COMPANIES COMBINED.

Summary of the Income, Expenditures, Assets, Liabilities, and Balances of the several Companies, December 31, 1867.

NAME OF COMPANY.	Location.	Guarantee Capital.	Gross Income.	Gross Expenditures.	Gross Assets.	Gross Liabilities.	Surplus as regards Policy-holders.	Surplus or Impairment of Capital.
MASSACHUSETTS Cos.								
Berkshire,	Pittsfield,	\$40,000	\$461,412+	\$276,409+	\$869,398	\$300,130	\$69,368	+\$29,268
John Hancock Mutual,	Boston,	100,000	514,746	194,591	884,708	627,454	257,354	+ 15,254
Massachusetts Hospital,	Boston,	500,000	49,141	127,855	798,688	126,000	672,688	+172,688
Massachusetts Mutual,	Springfield,		948,215+	478,562+	1,358,244	1,582,582	275,662	..
New England Mutual,	Boston,		2,220,078	1,244,962	6,220,942	5,567,978	652,064	..
State Mutual,	Worcester,		173,282	95,605	832,067	773,813	56,254	..
Totals,		\$640,000	\$4,366,374	\$2,417,984	\$11,464,047	\$9,477,957	\$1,986,090	+\$359,210
COS. OF OTHER STATES.								
Htma,	Hartford,	\$150,000	\$5,158,562	\$2,019,669	\$7,509,809	\$6,121,887	\$1,477,922	+\$1,327,922
American Popular,	New York,	100,000	108,945+	63,518+	222,941	148,457	74,184	- 25,516
Atlantic Mutual,	Albany,	110,000	112,254	82,950	266,939	157,514	109,425	- 575
Brooklyn,	Brooklyn,	125,000	539,446+	251,697+	688,480	527,106	161,374	+ 36,374
Charter Oak,	Hartford,	200,000	2,375,694	1,351,870	3,709,081	3,100,301	608,280	+ 408,280
Connecticut General,	Hartford,	251,000*	125,009	64,218	335,994*	152,893	223,101	- 27,899
Connecticut Mutual,	Hartford,		7,230,006	2,965,833	17,669,029	12,553,655	5,073,374	..
Continental,	Hartford,	300,000	432,565	125,444	781,234	401,913	379,321	+ 79,321
Continental,	New York,	100,000	88,250+	224,712+	906,58	747,381	158,677	+ 58,677
Economical Mutual,	New York,	100,000*	112,334	70,974	274,108*	155,106	119,002	+ 19,002
Equitable,	New York,	100,000	3,257,923	1,565,863	5,103,881	4,745,319	358,162	+ 258,162
Excelsior,	New York,	125,000	30,756	27,941	148,892	33,088	115,804	- 9,196
Germania,	New York,	200,000	1,016,380	448,909	1,872,863	1,561,718	31,145	+ 11,145
Globe Mutual,	New York,	100,000	603,698	271,164	1,158,997	1,026,717	131,380	+ 31,380

Great Western,	\$115,000	\$98,723	\$261,701	\$126,092	+\$11,092
Guardian Mutual,	125,000	703,962	410,869	1,040,546	+24,168
Hahnemann,	200,000	72,057	66,324	261,551	-37,310
Hartford Life and Annuity,	300,000	81,440	67,915	349,225	-1,505
Home,	125,000	1,043,555†	577,689†	1,635,406	+104,626
Knickerbocker,	100,000	2,077,183	946,270	3,020,601	+260,874
Manhattan,	100,000	1,684,476†	1,245,895†	4,305,113	+585,270
Metropolitan,	200,000	27,909	7,964	313,194	+22,329
Mutual,	10,770,891†	5,290,917†	23,905,058	22,865	..
Mutual Benefit,	6,058,164	2,728,596	14,397,259	22,000,781	..
National, . . . . .	..	213,748	80,100	664,104	2,103,982
National,	130,000	154,154	100,240	232,308	..
Newark,	125,000	102,981	53,221	306,466	..
New York,	3,595,922	1,549,412	9,139,754	8,100,569	..
Syracuse,	120,000	60,836	36,443	180,090	1,039,185
New York,	100,000	1,362,879	610,173	76,785	1,494,277
North America,	1,709,315	627,349	2,610,414	2,595,051	12,126
Northwestern Mutual,	100,000	1,329,372†	457,886†	3,147,165	471,978
Phoenix Mutual,	150,000	174,338	86,022	2,218,344	77,395
Provident Life and Trust,	110,000	1,016,661†	424,044†	336,389	1,730,118
Security,	125,000	10,115	5,948	1,270,954	177,253
Standard,	500,000*	167,514	67,481	1,444,495	1,008,322
Traveler's, . . . . .	..	1,741,716†	652,388†	2,67,211	653,352
Union Mutual,	100,000	750,973	302,954	1,750,118	1,59,376
United States,	125,000	503,218	288,543	2,470,792	262,532
Washington,	200,000	507,094	286,834	946,24	1,59,336
Widows' and Orphans' Benefit World Mutual,	200,000	88,036	65,178	761,318	661,636
World Mutual, . . . . .	..	..	..	248,931	99,682
Totals,	\$5,311,000	\$48,146,504	\$26,636,394	\$119,021,453	\$98,750,350
Grand Totals,	\$5,951,000	\$22,513,378	\$29,054,378	\$103,228,307	\$20,271,103
					+\$3,946,242
					+\$4,305,453

* Not including Stockholders' notes.

† For fourteen months, from November 1, 1866.

It will be seen that, as regards the policyholders, all the companies are solvent; but that, as regards the shareholders, there are several in respect of which the *minus* sign points out that the business, as estimated by the legal standard, has so far resulted in loss to the shareholders. Well would it be for many shareholders in this country, if they could, in like manner, receive a timely warning from an authority not to be disputed, that their trusted managers, who are transacting a large business with extremely beneficial results to themselves, are proceeding on unsound principles, which must ultimately, if not corrected in time, terminate in ruin—ruin the more disastrous as it is the longer deferred.

It will doubtless have been present to the minds of our readers, that this balance of Assets over Liabilities appears to have been struck without any enquiry having been made as to the character of the Assets—a question of hardly less importance than that of their amount. Were this so in reality, the whole investigation would have been a farce, or something worse. But it is not. The details of the Assets are given in an appendix, and have not, therefore, hitherto fallen to be noticed by us; but quite sufficiently early in the Report, the Commissioner asks the pertinent question, “What are Assets?”, and the answer he gives is well worth our attention.

“It would,” he says, “be entirely idle to establish a standard of reserve, and compute the liabilities of a company in accordance with it, unless we went one step further, and required the company to respond in safe and legitimate assets.” He does not seem to have the power to pronounce judgment as to what assets are safe and legitimate. “All that is required is, that the specific character of the asset should be distinctly indicated, so that the public may be able to judge of its value as a security or investment.” Hence very detailed returns are required from the Companies. “The returns have generally been made with entire perspicuity and straightforwardness. Occasionally, however, some very plausible generic description has been found, upon sifting down, to cover up something that shunned the light. ‘Personal property,’ ‘leger [sic] balances,’ ‘book accounts,’ ‘notes receivable,’ &c., which may in terms cover anything and every thing, have come to be regarded as decidedly suspicious. In some cases, items of near \$100,000 have been returned in this way, conveying no data for even a shrewd guess of what they consisted, and imposing the necessity of further interrogation. It is proper to say that every *lucus a non lucendo* of this sort will be hereafter rejected without further question.”

Though without authority to say what assets shall, and what

shall not be regarded as legitimate, the Commissioner discusses this question at great length, and with much force, in order that the assured may be able to determine it for themselves. "About "some items," he says, "no doubt can exist, and no question is "made. Real estate is allowed to be a good investment," and "mortgages of real estate are among the very best investments,—all "things considered, probably the safest and best that can be made," whilst "Securities of the United States ought to be an investment of the most unquestionable character. . . . And so the "various State and other public and corporate stocks and bonds, if "put in at their actual cash market value, and loans amply secured "by any of these as collateral, and cash on hand and in bank, are "allowed to be legitimate assets."

It is satisfactory to learn that "all of the foregoing make up "about two-thirds of the gross assets of the companies combined, "and about four-fifths of their aggregate reserve fund," the proportions varying, of course, in different Companies.

Other assets he pronounces to be legitimate, though their right to be so considered has not gone unquestioned. Of these, are "*Accrued interest, not due or collected*"; "*Unpaid and deferred premiums*," which "fell due during the year ending on the day which is the date of valuation," on policies then in force; and "*Premium notes and loans*" (the American equivalent to the English *Half-credit premiums* in arrear), provided the premium note, or other credit on any policy, did not exceed the then net value of the policy. The extent to which this system is resorted to in America, may be judged of by the fact that the premiums in arrear vary from *nil* to 58.81 per cent of the net assets of the respective Companies, and are, in the aggregate, equal to 28.01 per cent of the total net assets of all the Companies combined. Loans on personal security, and all kinds of stocks and bonds of doubtful or speculative value, "ought," says the Commissioner, "to be entirely abstained from." This condemnation of loans on personal security seems to us rather too sweeping; for the experience of many Offices in this country is that, when transacted with proper care, they are safe and profitable investments, and in every way eligible for Life Insurance Companies. There is one item commonly to be found among the assets of American Companies, against which the Commissioner especially sets his face. We refer to what are called "*Committed commissions*." "In all cases they have been rejected as assets "against the net premium reserve." His reasons for such rejection are stated in the following terms:—"Commissions form

“ an important part of the expenses which the margin or loading “ was intended to provide for, and whether paid in advance, “ or from year to year, the money paid on account of them is “ an expenditure, and not an investment. It may be a very “ judicious expenditure. Whether it is, or is not, wise for a “ company to burden all the future premiums on a policy with a “ commission or annuity in favour of the agent who gets the “ policy, it may be very prudent for a company which is under “ such a liability to get rid of it. But discharging a liability does “ not make an asset. . . . It may also be questioned on “ broader grounds, whether the practice of paying or buying com- “ missions in advance, is one that ought to be encouraged. With “ some of the companies, it is confessedly a concession to the “ apparent necessity of securing effective agents by a large imme- “ diate inducement, and not the dictate of sound policy. If life “ insurance is a good thing, and needs the eloquence of an agent, “ inspired by a commission, to impress this fact on a reluctant and “ procrastinating public,—both of which premises are unquestion- “ ably true,—he ought, by the same token, to have some inducement “ to perpetuate the benefits of the insurance by keeping the policy “ alive, as well as a very powerful one to get it at the first.” As bearing on these remarks we quote a statement which occurs early in the Report, that, “after making due allowance for the “ legitimate termination of policies by death, purchase and expiry,” some 40,000 policies, insuring more than \$100,000,000, were allowed to drop in the year under review “from a mere want of “ persistency on the part of the assured.” These policies were exactly a third of the whole number issued in the preceding year, in which the great bulk of them was doubtless issued. We will not now give an opinion as to the propriety of the Commissioner’s decision in rigidly excluding all these “commuted commissions” from the list of assets; but content ourselves with remarking that, if this course be taken, it is clearly unjust, if not absurd, to require of the Offices a reserve in realized assets computed by the Experience 4 per cent net premiums, in respect of the policies on which the commuted commission has been paid. At the end of the first year of such an insurance, after the commuted commission and other expenses have been paid, and the current claims provided for, is it possible that a sum will be left at all approaching the Experience 4 per cent reserve? On the other hand, what actuary would venture to say that, under the circumstances, it was in any way necessary that the Office should possess that reserve? In these and some other respects it appears to us that the Commissioner shows a not unnatural tendency to magnify his office and exceed his authority.

Judging by results, it would appear that the wholesome restraint of publicity is not enough to exclude doubtful assets from figuring in the yearly balance sheets. Whilst in the case of a great and prudent Company like the Mutual of New York, there is hardly an item in its tale of securities, vast as they are, to which the most captious could take exception, there are other Companies whose list of assets affords hardly one on which the eye can rest with satisfaction. Railway, Bank, and Fire Insurance Companies' *shares*,—*shares* in a Linen Company, a Live-Stock Insurance Company, a Gas Company, Adams' Express Company, a Carpet Company, a Mail Steamship Company, a Telegraph Company, a Printing Company, "Wells, Fargo & Co."—are specimens of securities, often for considerable amounts, that meet one on almost every page of the returns, though most frequently and most largely in those of inferior Offices, which the public has been taught to avoid. These, let it be remembered, are assets which the Commissioner has had no alternative but to admit, their character having been stated with distinctness, and the legal obligation having been thus fulfilled. Amongst those which, lacking such definiteness, the Commissioner has been able to exclude, we find some which speak volumes for the ingenuity of their contrivers;—"printing and stationery, estimated, \$4,000;" "stationery in office and with agents, \$7,500," are examples.

Having investigated the condition of solvency of each Office, and exhibited in detail the data on which the investigation was made, it might on the first blush be thought that the labors of the Insurance Department were ended. But the State, or the Commissioner in interpreting the duty it imposes on him, has wisely thought otherwise. In what has been already done, there has been little to indicate in what degree there exists prudence of management, which, even in regard to solvency, is almost as important to an Office in the future, as is a sufficiency of assets in the present. Especially, however, is it important in relation to profits. Prudence lies at the root of gain; "and among a people with whom thrift is a cardinal virtue, and whose practical shrewdness is quick to detect the fact that a thing costs more than it is worth, life insurance cannot expect to recommend itself to the public favour for any great length of time, unless its benefits can be secured without too large an outlay on its machinery."

Returns have, therefore, to be made in such a form as to exhibit the whole internal economy of the Offices, without concealment or gloss. Again we have ventured to give a specimen, which includes the returns of two Companies at once amongst the largest and the most economically conducted, the Mutual Benefit Company holding, in fact, the very highest place in the latter respect.

LIFE INSURANCE COMPANIES OF OTHER STATES.
Abstract of Annual Statements for the Year ending December 31, 1867,—with Detailed Statements of Assets and Liabilities.

	MANHATTAN, New York.	METROPOLITAN, New York.	MUTUAL, New York.	MERIDIAN Benefit, Newark, N. J.
GUARANTEE CAPITAL.				
Whole amount of guarantee capital, of capital actually paid up in cash, consisting of stockholders' notes, par and cash market values of each share,	\$100,000 00 100,000 00 .. \$50 ..	\$200,000 00 200,000 00 .. \$50 ..	........	........
ASSETS.				
Gross present Assets,	\$4,305,112 72	\$313,193 94	\$23,995,057 97	\$14,391,253 54
LIABILITIES.				
Gross present Liabilities,	\$3,619,842 95	\$90,865 02	\$22,500,781 19	\$12,187,277 15
INCOME.				
Whole amount received for premiums in cash, in promissory notes and securities, for interest on premium notes and securities, for interest on mortgages of real estate, for interest and dividends from other sources, from other companies for claims on re-insurance policies, for rents, from all other sources,	\$1,060,571 06* 346,626 01 277,279 12	27,264 87 .. 644 54	\$9,073,890 77* 1,082,964 11 546,361 62 .. 67,375 00 300 00	\$3,401,636 31 1,726,844 61 245,013 73 182,220 31 499,680 43 .. 2,768 80
Gross Income during the year,	\$1,684,476 19*	\$27,909 41	\$10,770,891 50*	\$6,058,164 19
EXPENDITURES.				
Amount paid for losses and claims on policies in cash, in premium notes and securities, on lapsed, surrendered or purchased policies in cash, in premium notes and securities	\$471,747 79† 28,878 96 51,344 11 122,651 04	.. .. .. ..	\$1,258,293 56a .. 249,433 02	\$932,152 91a 76,621 88 67,705 74 254,527 32

The facts, in regard to expenses, disclosed by these returns, are then thrown into five tables, with results which, had they reference to Offices in this country, might well give rise to the most lively apprehensions. They are serious, even from an American point of view, and after allowing for counterbalancing advantages existing there which are not possessed by us.

The tables are—A, showing “*Ratio of Commissions to Premium Receipts*”; B, “*Ratio of Gross Expenses (excluding Dividends on Guarantee Capital,) to Premium Receipts*”; C, “*Ratio of Expenses (including Net Cost of Guarantee Capital) to Entire Receipts*”; D, “*Ratio of Gross Expenses to Gross Receipts*”; and E, “*Synopsis and Average of Expense Ratios for 1867*.” The multiplicity of these tables is, we think, due either to the weakness or the pity of the Commissioner, who,—regarding “comparisons as odious, especially “on a point so sensitive as this,” and believing that “the relative “cost of insurance in the several companies cannot fairly be judged “of from a single stand-point,”—exhibits the ratio of expenses in several aspects, “in the hope that both the strong and the weak points “of each company, on the score of economy, may crop out some-“where.” The three intermediate tables have a special value, inasmuch as by contrasting the year 1867 with both the years 1866 and 1865 they show us that matters are but little on the mend. Taking the years in the order just stated, the ratios in table B, for all the Offices combined, are 19.05, 19.97 and 17.50 respectively; in table C they are 17.31, 17.98 and 15.03; and in table D they are 17.58, 18.32 and 14.59. But the most interesting table is the first. If there be a lack of economy anywhere, it is sure to show itself, in its most vicious form, in the matter of commission. The gross premium receipts of the 47 Offices for the year 1867, were \$55,419,164, and the gross expenses, excluding dividends on capital, \$10,558,731, or 19.05 per cent of the whole. Of these expenses, \$6,648,773—equal to 12.00 per cent on the premiums—were for commissions. The percentages varied, of course, in the different Offices, the lowest being 6.34 and the highest 24.99. In common fairness, it should be stated that the sums returned by the Companies as commuted commissions, and treated by them as investments, have here been charged in the expenses of the year. Giving the Companies the benefit of their view of the case, \$881,550 would have to be deducted, thus reducing the percentage of commission on the premiums to 10½ per cent, and that of the gross expenditure to 17½ per cent. To one Office, the Mutual of New York, such a correction would

be of the highest value. It is in these returns charged with \$1,000,860 as commission; it claims credit for no less than \$641,305 as commuted commissions, thereby reducing the 11.03 percentage of commission on premiums, as given by the Commissioner, to under 4 per cent. Such a correction in the case of any Office would, however, be far more unduly lenient than the plan of the Commissioner is unduly severe; for it is obvious that much of the commission commuted, is commission which must have been earned in connection with the business of 1867, and, as such, is chargeable on the receipts for that year. The importance of this consideration will be seen when we recall to our recollection that the new business of that year was, in amount, rather over a third of the whole sum remaining assured at the close of it.

Substantially, the fact remains that the ratio of the expenses is, in America, extremely high,—certainly not less than 18 per cent on the premiums. In the case of the Mutual Benefit Company, 12 per cent of the total premiums has sufficed for its expenses, and it might, therefore, suffice for others; and yet, in the face of this, we find such enormous ratios of expenses to premiums as 40 and 50 per cent, even in the case of established Companies. These, be it remembered, too, are all Companies that, with the aid of their capital, are solvent as regards their policy-holders. Well may the Commissioner point out that “the need of “reform in certain directions is too obvious to be overlooked,” though, with something approaching to unworthy timidity, he contents himself with showing the facts in regard to the expenses of the past year, without “intending to give aid and “comfort to those alarmists who predict that this is the rock on “which the system is destined sooner or later to split.” We ourselves, without being alarmists, certainly think that it is. Following out the metaphor, there is, we are convinced, many a well found ship, heavily laden with the treasures of Assurance, now struggling with the fast whelming waters, whose broken keel and riven sides tell the tale, but too truly, that the once stately galleon has already fallen, in an evil hour, on this sunken and deadly rock. Publicity—the publicity which we contend for—may not, it is true, save these torn and shattered barks, or much of their costly freight, but it will at least serve to notify the world of their unseaworthiness, and, by such timely warning, keep others from venturing, in their unsafe bottoms, the sacrifice of their toil and, it may be, the sole inheritance of their children.

These lines had not been fully written when the introduction

into Parliament of Mr. Cave's Bill, showed that the task of legislating effectually for Assurance Companies had come to be regarded as within the possibilities of English statesmanship. We shall be glad if anything we have said may help forward that measure. Without approving of all its details, which this is neither the time nor place to discuss, we regard it as having taken hold of the right principle, and therefore as sufficient, if shaped with care, to lessen, if not to correct, the evils at which it is aimed. If it become law, we believe that it will be efficacious either to justify or to remove the suspicions which now attach, whether fairly or unfairly, to so many Offices.

The length to which our remarks have run, leaves us less space than we could desire for our notice of the discussion, to which we have already adverted, as to the comparative merits of the "percentage" and the "contribution" methods of dividing surplus. The percentage plan has its advocates amongst the seventeen correspondents of the Commissioner, as have one or two altogether novel methods of division; but the majority of the writers, and those certainly of most authority, give preference to the contribution system, and it is on that that the chief interest of the discussion concentrates itself. Mr. Homans has already in these pages said, so well and so fully, all that can be said on behalf of the system which he has the merit of having in whole or in part devised; and we have also ourselves, on a previous occasion, so frankly admitted its advantages, that lengthened repetition of its claims to consideration is needless now. But, still differing from its admirers as to its absolute perfection, and as to the need for its universal employment, we deprecate the tone adopted in the discussion by some of its adherents, which we think but little to their credit. It exhibits not merely the proverbial zeal, amounting to rashness, of recent converts, but that worst form of the tyranny of numbers—the desire it too often exhibits to compel that uniformity of thought, which results always in the unfruitfulness of monotony. We can pardon, readily enough, the enthusiasm of Mr. McAdam, who asserts that the contribution plan "affords strict mathematical justice to all," and that "it is easily understood, —more comprehensible than the percentage system, which is inexplicable,"—that being merely excess of zeal. We can forgive, whilst taking leave to doubt, the assertion of Mr. Homans, that, in addition to being simple and easily explained, "it is popular with "agents and with policyholders, and, what is of more importance, is "acknowledged, almost universally, to be just and equitable,"—that being but the natural partiality of a parent for his own offspring.

But when Mr. McCay links the word "honest" to "just," and appeals to one's "moral sense" to support his view that "the percentage plan is unjust, and monstrously so," being "systematic robbery on a gigantic scale involving millions upon millions every year," whilst "the contribution plan is just,—perfectly just";—and when, above and beyond all this, the Commissioner himself casts aside all judicial gravity, and, with the airs, adopts the language of stump oratory, permitting himself to say of the percentage plan, that, in dealing with the money of the insured, it "is like the hospitality " of the famous old robber of Attica, who, if the legs of his unwilling guests were too long for his bed, lopped them off, and "stretched them to the requisite length if they were too short";—we think it time to protest. Such language is not scientific, nor philosophical, nor true. Is it likely to be convincing?

Not in these columns will it be denied that in their efforts to perfect a more equitable plan of dividing surplus, the American Actuaries have done wisely and well, both for their own fame and the interests of assurance itself. But it must not be forgotten that, in this respect, circumstances have pressed closer on them than they have done, or are ever likely to do on most of us. The economic condition of assurance widely differs in the two countries. As we all know, a large portion of any surplus is made up of interest realized in excess of the expected rate, and is derived mainly from the older policies having the largest reserves,—a fact of which the percentage system of distribution takes no note. In America this is a far more pregnant circumstance than it is here. We assume 3 or sometimes $3\frac{1}{2}$ per cent interest as the basis of our premiums, and value our liabilities most of us at 3, some at $3\frac{1}{2}$, a few at 4 per cent; whilst we realize, it may be, a net interest of something, though not much, over the last named rate, the cases being rare in which the interest approaches closely to 5 per cent. The Americans almost universally base their tables and valuations on 4 per cent interest, and as generally realize fully 7 per cent. The right disposal of the surplus interest, therefore, is with most of us of little moment in comparison with its importance to them. Hence, there has been a stimulus acting on their inventive faculties either wholly wanting, or existing in a much smaller measure, amongst us. They have, as we have said, wisely acted on its promptings; but, nature being frail, they have fallen into the error of thinking that it has led them to perfection.

In claiming for this new system that it "works strict mathematical justice"—"perfect justice," they display neither accu-

racy nor modesty. In the important particulars of expenses and cost of assurance, it makes no attempt to deal out justice *inter pares*, as we pointed out in our July number; and its expediency we regard as more than doubtful, if not subject to checks that almost uproot its principle. It may appear ungracious to join issue with Mr. Homans on what would appear at first sight to be a question of fact; but to ask us, as he does, to believe that the plan is simple, popular, and easily understood, is to draw unduly on our powers of belief. A principal, ever-present object in Assurance, is to get rid of violent fluctuations, by taking large averages. In his method of distribution, the very contrary course is pursued. Almost of necessity, the division is yearly. The period of observation is, therefore, of the briefest. The actual mortality at a particular age is made the ground work of the assessment on each policy for the cost of assurance for the year. Instead, therefore, of an aggregation, there is segregation of numbers,—small numbers observed over a brief space of time. Here we have, as everybody knows from daily experience, the amplest scope for the extremest variations. Men of consecutive ages, assured at the same time for like amounts, and even the same individual, assured under almost identical policies, but standing at different ages in the Office books, might receive the most widely differing bonuses, owing to the differing mortality at the respective ages. Indeed, it may even be, that for purposes of bonus the one policy shall be taken and the other left,—that whilst a large addition shall accrue to the one, nothing whatever shall accrue to the other. Nay, it is easy to conceive the case of a policyholder being “mathematically” called on to make good a deficit, the transactions of the year in respect of his class having issued in a loss. Nothing can be stronger, or more pertinent, than the following remarks, on this point, of Mr. McCay, one of the most enthusiastic upholders of the system: “If by (m'_{x+n}) is meant the ‘actual mortality’ at each age, as “ (r') , (P), and (e) represent the ‘actual facts’ instead of ‘theo- “retical assumptions,’ there would be great objections to this “understanding; because, even in a large company, there are “great irregularities in the actual mortality at each year of life, “and in a small company, there are still greater. At many of the “ages (m') might be zero in the largest company; and at other “ages, two or three or ten times larger than (m) . In both com- “panies, it might easily be three times as large for 47 as for 57, “or for 45 as for 46. The charges for one year’s losses would “change very irregularly from year to year for different members.

“ At one time they might be very large for one, and for another very small, while in the next year the reverse might happen. One of the insured might be charged heavily for every successive year for ten years, while another, one year older or younger, might be charged very lightly during the same period.” And on the subject of expenses, we add here the strong language of Mr. Elizur Wright, not so much to confirm our own view, as because it raises more broadly than we have yet seen the question of the real injustice, as we have always thought it, of charging, at any age, the same ratio for expenses on large policies as on small. He says, “ A much more important difficulty is that of properly assessing the expenses. The usual method, which I have pursued in these examples, is open to the serious objection of not only not having any satisfactory or logical argument in its favor, but of utterly confounding the important distinction between the self-insurance or savings bank deposit, and the insurance by the company. I need not say what would be thought of a savings bank charging fifteen per cent. on all the deposits for expenses. This plan of dividing according to contribution, is sure to call attention before long to the proper mode of assessing expenses; and when it does, we may expect some change of practice in the direction of equity.”

Perhaps a sufficient provision would be to fix a limit of the sum assured—say £200—below which no profits will be allowed to a policy, and in calculating the profits on the policies, to deduct that limit in all cases from the sum assured, and compute the profits with reference to the balance only.

But a more serious objection, viewed in relation to its equity, has been made to the contribution system. We find it in the number of the “ Insurance Times” of New York, for December, 1868, and, from internal evidence, we shall hardly be wrong in attributing its authorship to Mr. Meech, who is one of those who incline to the method of division which has generally and so long prevailed in England. His objection is that the contribution system is capable of very arbitrary and unequal application by the employment of different rates of interest in estimating the reserve. We subjoin his own explanation of it. The formula used in the calculations throws off, as will be seen, any gain from diminished mortality. As time goes on, and the Offices grow in bulk as well as in age, this gain will, he thinks, cease to be of much moment. We agree with his opinion, expressed elsewhere, that “ the mortality of insured lives evidently must approximate to that of the general

“community, as life insurance becomes universally practised,” though we cannot follow him in his succeeding assertion that, “in the long average, therefore, the experience of American companies will conform most nearly to the natural standard.” The following is the argument which we have ventured to attribute to Mr. Meech:—

“ Since the assets of American Companies now correspond to a three per cent net valuation, let us compare the dividends of that and higher rates of interest.

“ A party aged thirty-five years takes out an ordinary life policy of \$10,000, at an annual premium of \$273 (Carlisle, four per cent net, with 35 per cent added). Required, his annual dividends on the contribution plan, according as the premium reserve is reckoned at three, four, five, or six per cent interest, the company receiving six per cent on investments, above expenses.

THREE PER CENT CONTRIBUTION PLAN.

End of Year.	Premium Reserve.	Contribution Dividend.	Premium, less Dividend.
1	\$128 70	\$63 25	\$209 75
2	259 90	67 19	205 81
3	393 20	71 19	201 81
4	529 10	76 56	196 44
5	663 80	79 30	190 70
10	1,322 60	99 07	173 93
20	3,100 50	152 40	120 60
30	4,898 00	207 83	65 17

FOUR PER CENT CONTRIBUTION PLAN.

End of Year.	Premium Reserve.	Contribution Dividend.	Premium, less Dividend.
1	\$108 50	\$81 26	\$191 74
2	230 00	83 69	189 31
3	384 60	85 78	187 22
4	451 20	88 11	184 89
5	567 40	90 44	182 56
10	1,136 06	101 89	117 19
20	2,782 10	134 73	138 27
30	4,588 40	169 86	103 14

FIVE PER CENT CONTRIBUTION PLAN.

End of Year.	Premium Reserve.	Contribution Dividend.	Premium, less Dividend.
1	\$92 20	\$96 16	\$176 84
2	188 60	97 12	175 88
3	285 90	98 12	174 88
4	386 90	99 11	173 89
5	486 90	100 11	172 88
10	977 90	105 02	167 98
20	2,498 90	120 23	152 77
30	4,205 90	137 30	136 70

SIX PER CENT CONTRIBUTION PLAN.

“ End of each year, contribution dividend, \$108 33 ; premium less dividend, \$164 67 ; the same in each year after the first. With the Carlisle Table, if i denote the assumed rate of interest to which the net premium P and net reserve R must correspond.

$$(273 - P) 1.06 + (R + P) (.06 - i) = \text{Dividend.}$$

“ It is evident that when i is made equal to .06, the term containing R vanishes, leaving the premium less dividend \$164 67, uniform in each year, as in the common percentage plan.

“ Comparing, now, the above scales of dividend, the first, which is the more equitable, with the second, the differences are remarkable and apparently greater than any errors of the common percentage plan.”

But may it not be said that the American Actuaries have set themselves an impossible task? Following them within certain bounds with respect and thanks, we part company with them when they attempt this mathematical hair-splitting. Their purpose, they say, is to establish a perfect equity amongst the assured, forgetting that that idea, if followed to its logical issue, would be fatal to assurance itself. We assure, at the same rate, the dwellers in cities and the dwellers in the country, measuring by a common standard, life in Liverpool, for example, where it prematurely fades, and life as it flourishes to the extreme of age on the hills of Surrey or the downs of Sussex. For the purposes of assurance we take little or no account of occupation. In this respect, we winnow with a sieve so coarse, that through its meshes can pass, with equal freedom, the county squire or parson, who leads his peaceful life amid ease and plenty, and the over-tasked brain-worker of towns, “ who scorns delights and lives laborious days.” Where in all this is the equity? And this is but a sample of the inequities running through the assurance principle,—which the Americans, were they consistent, would term iniquities. We do not, indeed, think them so; but neither do we think it “ monstrously unjust,” or “ systematic robbery on a gigantic scale,” that bonus should be allotted on the percentage, or on any other system well understood by those who adopt it.

We are ourselves very much disposed to think, that the Americans would do well to diminish the importance of this perplexing bonus question, by more nearly approximating, in their tables of rates and modes of valuation, to obvious facts. Bonuses, we are convinced, have worked a moral mischief, by withdrawing the atten-

tion of the assured from the safety of his Office, on which it should be chiefly fixed, and concentrating it on the accident of gain. It is a question, worthy of some thought, how much the large marginal addition to the premium known to be sufficient, has tended to degrade the conduct of assurance business. With loaded premiums, an unscrupulous actuary may play as a gambler plays with loaded dice. Much of the extravagance, the easy admission of lives, the imprudent investments, to which Companies have owed their decay or fall, we believe to have been due to the knowledge that the premium demanded was far more than that required for the risk. We are inclined to think that nothing would purify and benefit the cause of assurance so much as a well-considered reduction of the premiums. By circumscribing the area of chance, the arts of prudence and caution would succeed the contrivances of reckless ambition.

We stay but to notice the fact that, amongst other matters which we have not time even to glance at, there is embodied in the Report what is termed a National Life Table, as constructed by Mr. Meech from statistics of white males in the whole United States. Its close agreement with the Carlisle Table is, says Mr. Meech, "truly surprising, and evinces the sagacity and good fortune of his (Mr. Milne's) selection." Mr. Meech acknowledges the assistance afforded by Mr. Makeham's papers in his graduation of the Table, the facts of which he throws into D and N Columns after the fashion of Mr. Chisholm and Dr. Farr.

Our opinion of this Report will have been gathered as these pages have been perused; but, as a final word, we cannot refrain from adding that nothing on the subjects of which it treats more interesting or more able, has ever come under our observation.
